

OBITUARY.

MAX JOSEF VON PETTENKOFER, M.D.,

Professor of Hygiene in the University of Munich.

IN Professor von Pettenkofer, who died on February 10th, sanitary science loses one of the greatest of its "old masters," to use a German phrase. The circumstances of his death give a special sadness to the event, for, overwhelmed by the infirmities of old age, he is said to have shot himself in a fit of depression which darkened his reason.

Max von Pettenkofer was born at Lichtenheim, near Neuburg, on the Danube, in 1818. He was originally intended for the profession of pharmacy, but, finding his position distasteful, tried his fortune on the stage. After a few months, however, he doffed the buskin and resumed the student's gown. He studied medicine at the Universities of Munich, Giessen, and Würzburg. He took his Doctor's degree at Munich in 1843, and in 1847 was appointed Extraordinary Professor of Pathological Chemistry in that University, becoming Ordinary Professor in 1853. In 1866 a Chair of Hygiene was established for him and this he continued to occupy till his death.

The insanitary state of Munich and the frequency with which the city was visited by epidemics of cholera and typhus led him to investigate the conditions governing the spread of these diseases. Beginning in 1854 (says Dr. C. Childs in a paper on the History of Typhoid Fever in Munich, which was published in the *Lancet* of February, 5th, 1898) as a believer in the constant convection of typhoid fever and cholera by the drinking water, Pettenkofer first turned his attention to the distribution of cholera during the great epidemic of that year. He expected to find exceptional opportunities for proving the truth of the drinking water theory owing to the number and peculiar distribution of the many different water supplies in the city. He ascertained the water supply of each single house by means of the Royal and Municipal Water Rates and by personal inspection, but in all cases his expectations were disappointed, and he could find no connection, local or temporal, between the water distribution and the cholera outbreaks. He made similar investigations with regard to the typhoid fever incidence in Munich and the distribution of the different water supplies, and always with similar results. He could never trace any of the local outbreaks which frequently occurred to any of the many separate water supplies. Finally, he was convinced that in Munich there was not the slightest connection between the drinking water and the typhoid fever. He next turned his attention to the conditions of the soil. In 1856 the observations of the height of the subsoil water in various parts of the city were begun. His researches showed that there was a constant relation between the variations of the level of the subsoil water and the variations in the typhoid fever mortality.

Cholera was Pettenkofer's favourite subject and he wrote much about it. His chief work was entitled *Boden und Grundwasser in ihren Beziehungen zu Cholera und Typhus*. In it he formulates his well-known theory that the spread of cholera and typhoid fever depends upon the movements of the subsoil water, the prevalence of these diseases increasing after a fall in the level of that water. He also wrote on sewerage arrangements, on the hygiene of ships, and on the Relations of the Air to Clothing, Dwelling, and Soil, the last being a course of popular lectures; and he was co-editor of the *Zeitschrift für Biologie* (Munich) from 1865 to 1882.

Pettenkofer was much interested in chemical work connected with hygiene, and devised the method (generally known by his name) of determining the percentage of carbonic acid in air, which has been adopted by all observers until quite recently.

The influence of Pettenkofer on his own country has been

incalculable. The adoption of sanitary reforms, the creation of a sanitary service, the institution of chairs of hygiene, and the erection in 1872-78 of the splendid Munich Hygienic Institute, of which he became Director, are all directly his work. In 1872 he was invited to take the Chair of Hygiene at Vienna University, and in 1876 to become the first Director of the Imperial Gesundheitsamt in Berlin, but all such inducements failed to attract him from his work in Munich.

Pettenkofer was the pioneer of hygiene in Germany, where he was held in the highest veneration for his personal qualities not less than for his valuable contributions to science.

Distinctions were showered upon him. Among them we need only mention the Prussian *Ordre pour le Mérite*, for Science and Art which is the highest distinction obtainable in Prussia, and confers hereditary nobility on its recipient.

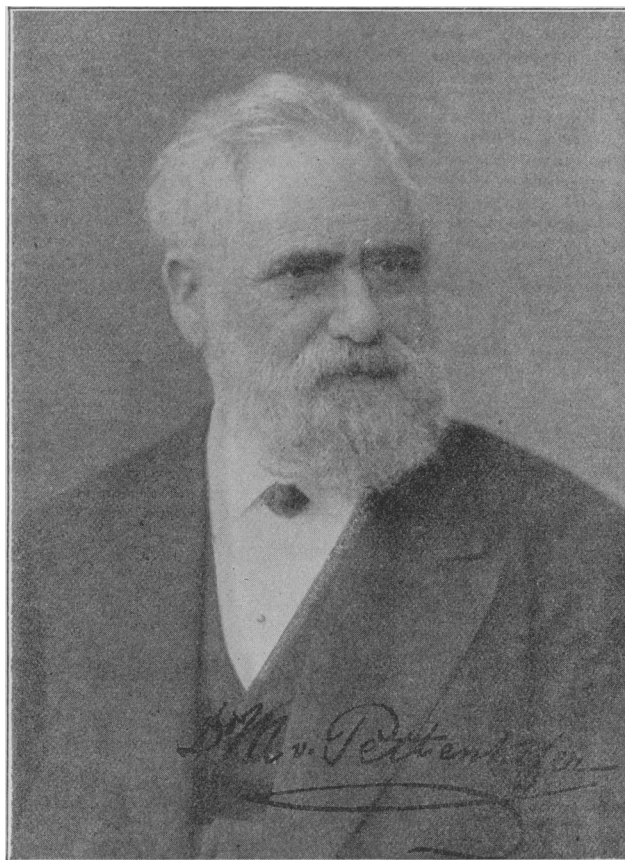
Writing in the *Times* of February 18th Sir JOHN SIMON pays the following touching tribute to the great German sanitarian:

"Though I am now far on in my 85th year, and owe to the eyes and hand of another my power of writing to you, I venture to beg you to let

me add my humble tribute to the transcendent merits of the late Professor von Pettenkofer, whom, though two years his senior, it has been my lot to outlive.

"The language of your Berlin Correspondent rightly represents the influence which his teaching exercised in leading Germany to right modes of medical government, and especially in teaching her to disinfect herself of odours which must have lasted from the days of Charles V.; but I may venture to add that from 45 years ago the power of his eloquent and earnest teaching in the subjects of which he was a consummate master, was felt in this country and in other parts of the world hardly less than in Germany, and that we all who have worked in the prevention of disease lament to have lost in him a noble leader.

"May I add that I have few brighter recollections in my long life than those of the few occasions when Professor von Pettenkofer paid flying visits to England, or when I had the



happiness of seeing him in his family circle at Munich, or of joining him at work at Weimar and Frankfurt. His sad end was probably determined by some hopeless condition of suffering, for though he had lost his wife nearly ten years ago, and had latterly retired to country life from Munich, yet last year I had letters from him in the autumn, and he astonished a friend whom I sent to see him by the alacrity with which he boated to welcome him."

Professor CORFIELD writes: At the Editor's request I send a few lines with regard to Professor von Pettenkofer, whom I knew both personally and by correspondence for many years. He was indeed a most remarkable man, vigorous in mind and body, a man of untiring powers of investigation and of original views which he knew how to defend with indomitable energy. His leonine type of countenance, so admirably shown in the photograph here reproduced, reveals at the same time his character. Of his views on sanitary matters and his discoveries it is not necessary for me to say much, as that will be done by others; I will merely mention that he strongly believed in the self-purification of rivers after the discharge of sewage into them, and said in one of his latest letters to me that he was sure he was right that at any rate in the case of "Isar rolling rapidly," no trace of the sewage of Munich could be found in it even at a comparatively short distance below the outfall.

He was an excellent speaker and was always listened to with great attention and respect when addressing assemblies of sanitarians anywhere. His evident conviction of the truth of his views, his vigorous manner and his fluent diction gave him a strong hold over his audience, who instinctively felt that they were in the presence of a great man. His power of teaching is attested by his many pupils scattered over the world, and its influence is felt by all sanitarians.

Withal he was a genial, kindly, and sociable man, and was in the habit of sending a New Year's card of greeting to his friends with a photograph on it of one of the fountains of the "Pettenkofer water supply" at Munich, showing the small profile medallion portrait of himself above the fountain.

After he resigned his professorship he retired to a most beautiful spot at Seeshaupt, at the farther end of the Starnberger See, where it was his delight to receive his friends, whom he would sometimes meet as he did myself, half-way across the lake, by going partly round it by train, and getting on to the steamer at one of the stopping places.

In his garden he delighted to show them a chair from which he could look down on the beautiful lake, and then, by merely turning it round, sit and gaze on the snow-clad Bavarian Alps. After a walk in the garden he would generally take his visitor for a row on the lake, manning the oars himself.

I remember wondering to myself the last time I saw him, in 1894, at that very spot, how he would bear his life of retirement and comparative mental inactivity, and I now fear

that it was the feeling of his comparative uselessness which preyed upon his mind, and which, together with the suffering caused by an incurable disease, forced him to his lamentable end.

ARTHUR HENRY JONES, M.D.LOND., M.R.C.P.,

Physician to the Northampton General Infirmary.

THE death of Dr. Arthur Henry Jones is felt as a serious loss to the town and county of Northampton, and a great grief to those who had the privilege of his friendship. He had a severe illness about a year ago from which he appeared to have completely recovered, but on February 10th he became alarmingly ill with a recurrence of symptoms, and died on the following day.

Arthur Henry Jones was the son of Mr. Frederick Jones, formerly of Grahamstown, South Africa, and was born in London on January 11th, 1853. He received his early education privately in London but spent part of his boyhood in South Africa. He had many relatives in the medical profession, and was the nephew both of the late Dr. S. O. Habershon, Physician to Guy's Hospital, and of Mr. Sydney Jones, Consulting Surgeon to St. Thomas's Hospital. Influenced, perhaps by these connections he chose medicine as a profession, and entered at Guy's Hospital. He obtained the diploma of M.R.C.S.Eng. in 1874. He was Exhibitioner and Gold Medallist in Materia Medica at the first M.B.Lond., and graduated M.B. with honours in 1876. He took the degree of M.D.Lond. in 1880, and the diploma of M.R.C.P. in 1882. He held the office of House-Surgeon at Guy's Hospital, and was offered that of Demonstrator of Anatomy, a post then generally regarded as a stepping stone to the staff. At that time the prospects of promotion to the office of Assistant-Physician appeared remote and he declined the offer though the anticipation has been falsified by events. In December, 1876, he was elected House-Surgeon to the Northampton General Infirmary. In 1881 he resigned this appointment, and in the following year was elected Honorary Physician to the infirmary,

and not only zealously discharged his special duties in that capacity, but was also a hard-working Governor of the institution, in the welfare of which he took the greatest interest.

He had meanwhile commenced practice in Northampton, and his skill and ability joined with his indefatigable industry and genial character to win him a leading position in the town. He took an active interest in the corporate life of Northampton, and was always ready to give his assistance in forwarding any work in which his medical knowledge might be of assistance to the public. Thus he took the initiative in 1886 in forming the Northampton Centre of the St. John Ambulance Association. He worked at the organisation of the local corps with zeal and enthusiasm, until it became one of the most efficient in the country. For ten years he was Honorary Secretary to the Northampton Centre, and on his resignation of that office was elected Chairman of the Committee. Many philanthropic associations, as for